



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,586	07/23/2003	Minshon J. Chiou	KB4615USNA	7746

23906 7590 10/06/2005

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,586

Applicant(s)

CHIOU ET AL.

Examiner

Norca L. Torres-Velazquez

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- ✓ Paper No(s)/Mail Date 101603.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a penetration resistant life protection article that have at least 38 flexible layers, does not reasonably provide enablement for a "plurality of layers" in the broad description of the term that could have two layers and provide a protection article meeting the NIJ standards disclosed by Applicants in the specification. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. It is noted that the examples disclosed by the Specification involve at least 38 layers (22 layers of "C" and 16 layers of "D"). It is the Examiner's interpretation of the present disclosure that a "penetration resistant life protection article" of the present invention must have at least 38 layers to meet the disclosed standards for issued by NIJ. (Refer to page 1 of the Specification)

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 1771

5. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the number of layers that form the plurality of flexible layer as to provide a penetration resistant article. It is noted that the examples disclosed by the Specification involve at least 38 layers (22 layers of "C" and 16 layers of "D"). It is the Examiner's interpretation of the present disclosure that a "penetration resistant life protection article" of the present invention must have at least 38 layers to meet the disclosed standards for issued by NIJ. (Refer to page 1 of the Specification) Therefore, the claim is rendered indefinite because it fails to indicate the number of layers comprising a "plurality of layers".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHIOU et al. (US 6,133,169).

CHIOU et al. disclose a combination of layered structures for protection from threats of ice pick and knife penetration and, also, ballistic threats. (Abstract) The reference teaches a the

Art Unit: 1771

plurality of tightly woven fabric layers that are made from yarns of high strength fibers wherein the yarns generally have a linear density of less than 500 dtex and, preferably, the individual filaments in those yarns have a linear density of 0.2 to 2.5 dtex. The reference teaches the use of para-aramid fibers, preferably poly (p-phenylene terephthalamide). The preferred linear density for the yarns is 100 to 500 dtex and those yarns are preferably woven to a fabric tightness factor of 0.75 to 1.00. (Col. 3, lines 39-67)

CHIOU et al. is silent to the use of yarns made from staple fibers.

HOWLAND discloses a protective fabric of with enhanced resistance to penetration by knives and ballistic penetration. (Col. 2, lines 7-8) The reference teaches the use staple fiber yarns, the fibers with tenacity greater than 10 grams/denier and denier less than 1.5. (Refer to Claims 7-9) The reference teaches that the yarns comprise high modulus, high breaking strength (greater than 15 grams per denier) yarns. (Col. 3, lines 1-5)

CHIOU et al. discloses the claimed invention except that it uses continuous filaments yarns instead of staple fiber yarns (Refer to Col. 7, lines 47-54), HOWLAND shows that staple fiber yarns are equivalent structures known in the art of puncture resistance materials. Therefore, because these two materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute staple fiber yarns for the continuous filament yarns.

Although the prior art of HOWLAND does not explicitly teach the claimed energy to break of the staple fiber yarns, it is reasonable to presume that this property is inherent to yarns of HOWLAND. Support for said presumption is found in the use of like materials (i.e. staple fiber yarns made from aramid, with fibers of similar tenacity). The burden is upon Applicant to

Art Unit: 1771

prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of an energy to break of about 8 to less than 30 J/g would obviously have been present one the CHIOU et al. product made with the staple fiber yarns of HOWLAND is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

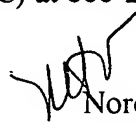
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

Art Unit: 1771

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

October 3, 2005